Silicon Based Ball Lightning Globule Structures and Signs For accumulation and retarded decrease of tunneling energy bullets.

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Abstract,

Recently performed Silicon based Ball Lightning experiments done by two different laboratories have both produced rest products in the form of Silicon globules, both with unusual complex internal and external structures.
These Silicon globule structures show strong differences with normal Silicon matter, which was reason to compare these complexities in detail and make suggestions for future research.
One of the clear phenomena is, that all globules show internal traces of evaporating tunnelling energy bullets, which according to Quantum FFF theory is supposed to be a first sign of Quantum Knots or micro-black holes. **As a consequence this is also a first sign of microscopic Dark Matter in the Lab.**

The origin of Quantum FFF theory.

Besides architecture I am active in design for sub-quantum imaging or microstructure of particles, forces and the vacuum lattice structure. The idea is that the different FORM aspects of the sub-quantum world is responsible for the FUNCTIONS and all the physical- and astronomical mysteries around us.
The result is a theory called: Quantum Function Follows Form theory. (Quantum FFF theory, described in more detail on Vixra library http://vixra.org/author/leo_vuyk)
I came to this Q-FFF model after 20 year research on scietific described anomalies found in the lab (e.g.Babock and Bergman 1964) or in space (e.g. I.I.Shapiro 1964)see; Quantum FFF experiments, a summary: http://vixra.org/abs/1305.0140) The difference between this theoretical Quantum FFF model of reality and mainstream physics is mainly,
A: That a "black hole" has no mass but is the origin of all "dark matter" in the universe and can exist at all scales from Quantum Knots (or Ball lightning)up to the Big Crunch- Big Bang black hole.
B: That "dark energy" is based on microcopic massless vacuum particles, energetic oscillating in opposing pairs and able to convert into pairs of electrons and positrons, e.g. at the horizon of black holes.
C: That the 135 GeV mass of the Higgs particle (found by the LHC in Geneva) could be translated into 135 GeV energy of the paired vacuum particles. (alternative Higgs)
D: That as a result, the Universe is cyclic, super symmetric and has the form of a raspberry shaped pulsating symmetric Multiverse with finite cycle time.
E: That all matter and humans have their instant entangled copy symmetric counterpart living inside those opposing supesymmetric lobes of the raspberry multiverse. whic is supposed to be the base for consciousness. That Humans and higher animals have the ability to influence conscious acts by a small retardation or lagging effect (300 msec) in decission making found by Banjamin Libet.called RPI and RPII (Readiness Potential 1 and 2) see:
http://vixra.org/abs/1103.0015 Wavefunction Collapse and Human Choice-Making Inside an Entangled Mirror Symmetrical Multiverse.

Introduction.

It was the team of professor Ronald Dekker of the TU Delft, the Netherlands, who found for the first time “Silicon residues” or globules as the result of the well known Plasma ball production (ball Lightning) by strong DC discharge through Silicon wafers.

Later (2012) I decided to repeat this experiment supported by R.Dekker, but with slightly different DC power settings and lab conditions which produced also small but different shaped silicon globules.
These globules showed clear structural external and internal differences compared to the silicon residues with globule shape produced by R.Dekker. et al.
In both experiments the resulting silicon globules showed evidence of internal channels or holes which seem to have played an energetic tunnelling role in the slow coagulation of the initial liquid silicon plasma droplets.
Both findings are reason to compare these differences in detail and make suggestions for future research.

Experiment 1.

Description made by R.Dekker's of his experiment. [ref: 19]
(quotation)
Introduction
Observations of ball lightning have been reported for centuries, but the origin of this phenomenon remains an enigma. The "average" ball lightning appears as a sphere with a diameter of 300 mm, a lifetime of about 10 s, and a luminosity similar to a 100 W lamp. It floats freely through the air, and ends either in an explosion, or by simply fading from view.

With these lines John Abrahanson and James Dinniss introduce the ball lightning phenomenon in their letter to Nature [1]. In this letter they report on the outline of a model that possibly accounts for the observed characteristics of these ball lightnings. They propose that ball lightning is due to oxidation of silicon nano-particles in the atmosphere. The silicon nano particles are formed as a result of a reaction of silicon oxides and carbon in the soil during a lightning strike.

To test this theory, Gerson Paiva et al. performed a simple experiment whereby an electric arc discharge from a carbon electrode to pure silicon generated luminous balls which, apart from the fact that they are much smaller, in many ways resemble ball lightnings [2]. On this site a description of their experiment including a video can be found [3]. Martijn Goosens and I are both involved in research on silicon devices at NXP Semiconductors & Philips Research in Eindhoven, Holland. So obviously we were intrigued by the results of Paiva et al., and we decided to repeat the experiment. To our astonishment we more or less observed the same phenomena! This page gives a short overview of our "Friday Afternoon" experiment. Before anybody starts to write us angry e-mails, let me start by saying that we by no means claim to have produced a real ball lightning. We have only observed some curious ball shaped objects with some of the properties attributed to ball lightnings……..

……..After a few seconds of "probing around" with the graphite rod, the silicon wafer is reduced into a heap of small silicon fragments. It is at this point that the ball lightning like spheres start to appear.
The spheres have the size of about 2-3 mm. On the movies and photographs they appear to be larger because they over-expose the sensor in the camera. The spheres are quite different from normal sparks. The sparks emitted from the arc usually bounce one or perhaps two times, and then fade away. The spheres on the other hand live much longer, up to 6-8 seconds. They bounce around in various directions. As can be seen in the video, the height of the bounces

varies. Careful examination of the video in slow motion reveals that some bounces are much higher than the previous bounce. The energy needed for this increase in height might come from the heat in the sphere, from an exothermic reaction going on in the sphere, or from rotational energy, if indeed the sphere is rotating. After the sphere extinguishes sometimes a residue seems to remain.

Personally I am still not fully convinced that the spheres are not just oddly behaving sparks. However, we showed the videos to some professional welders, who spend their whole life amongst welding sparks. They assured us that they had never seen sparks behaving in this way. But then again, they are not welding silicon with carbon electrodes! Also the bystanders who witnessed the experiment were convinced that the spheres were quite different in behaviour from regular sparks.

(end of quotation)

Next images are with permission from R. Dekker.

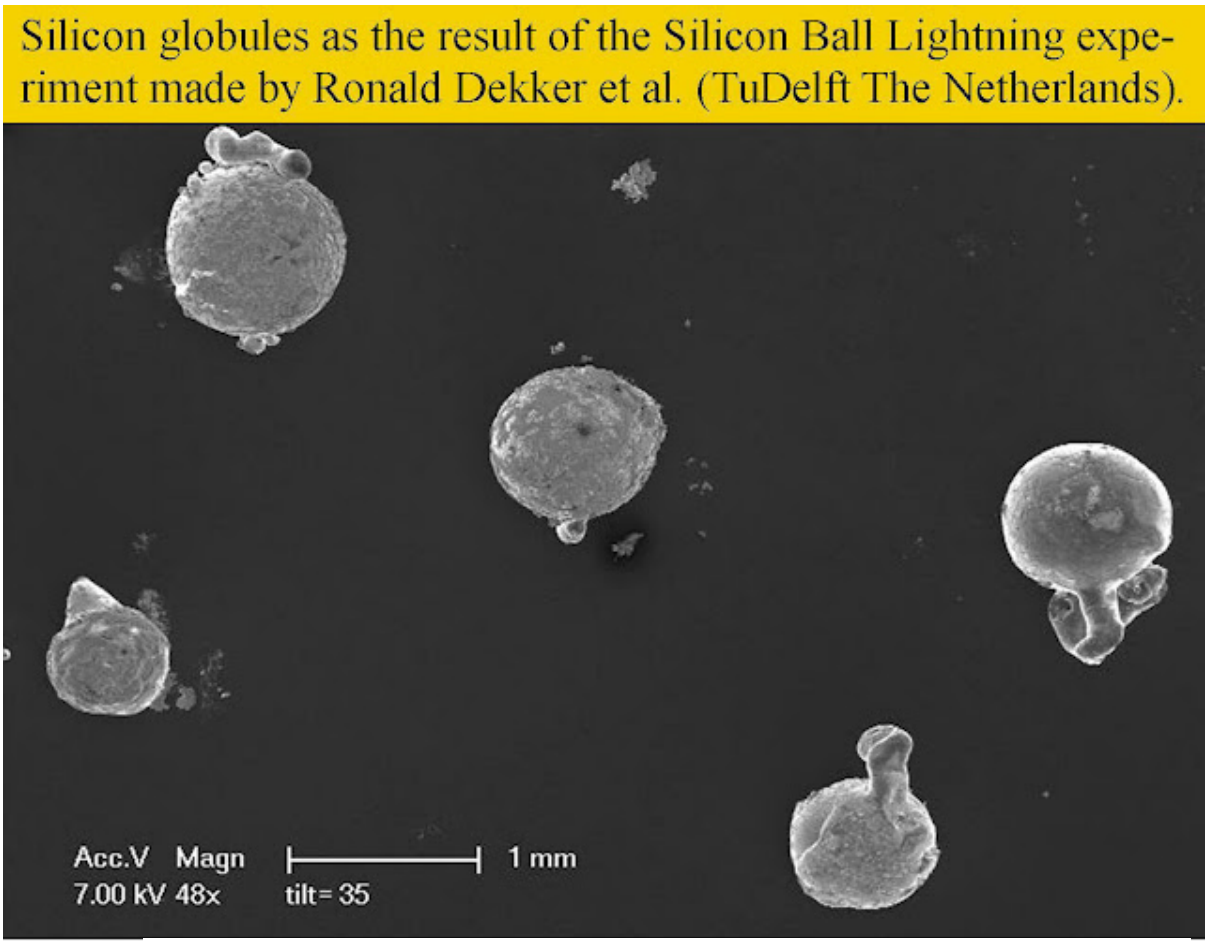


Figure 1, Image of some silicon nuclei, all with globular shape and equipped with one large and several smaller appendices and diameters between 0.4 and 0.8 mm

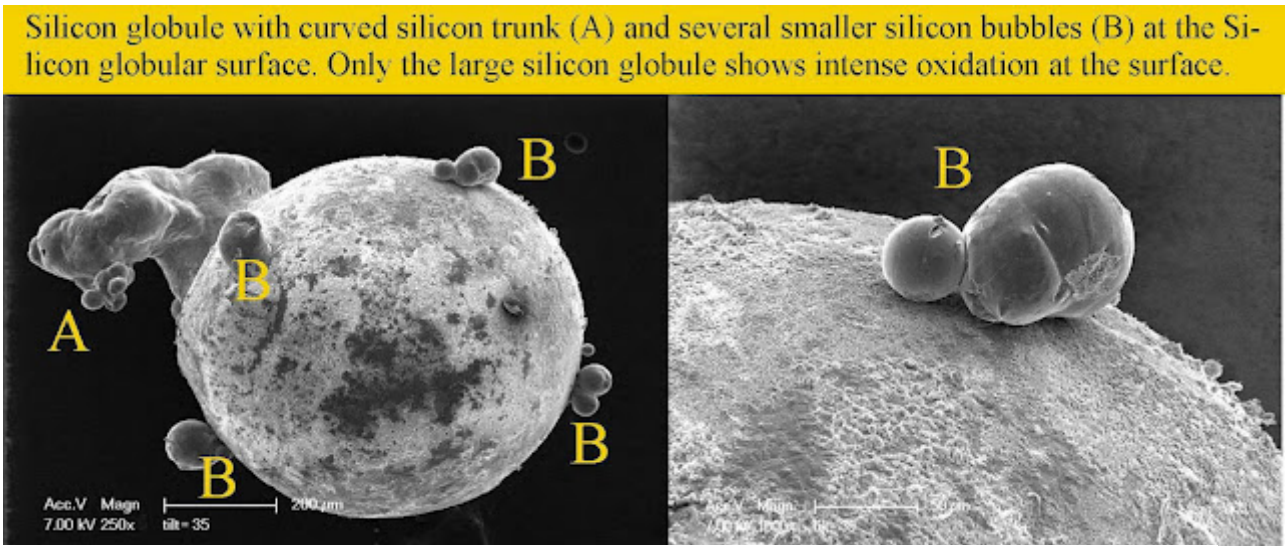


Figure 2, A remarkable globular nucleus: (Dekker at al) equipped with several small globules- and only ONE larger appendix (TRUNK A) without the oxidation skin observed at the Silicon globule.

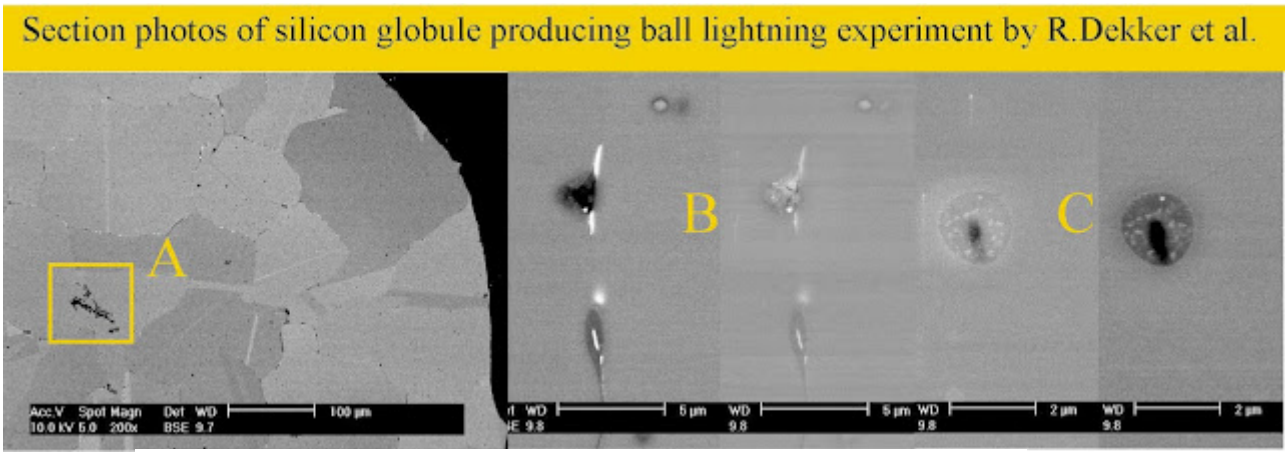


Figure 3, Examples of possible energetic tunneling locations in sectional view.
A: is a large central hole presenting an irregular shape with "arms" suggesting the beginning of the splitting process?
B and C: sectional view of different energy tunneling results.

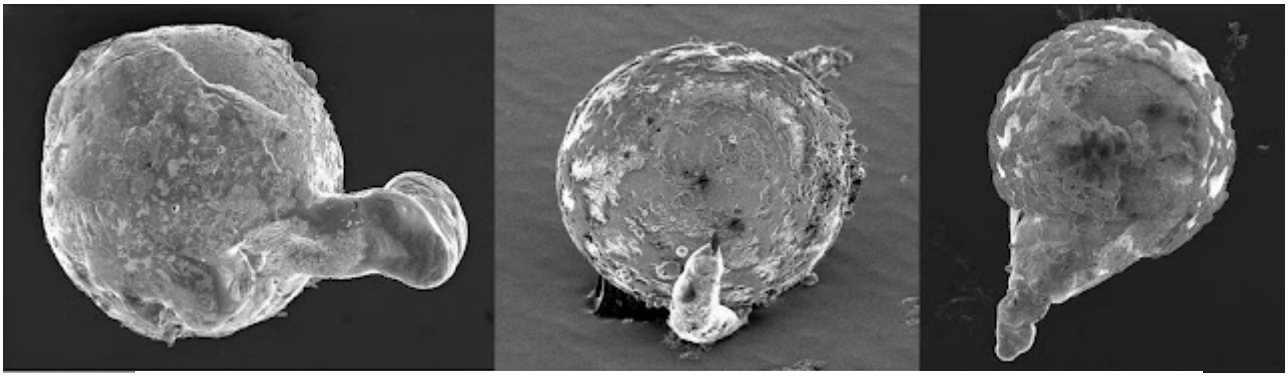


Figure 4, Examples of large appendices or energy tunneling trunks or funnels. (Dekker et al) Curved trunks are an indication for extra spin of the silicon globule at the end of the journey. (see also the "roundabouts" observed at the black scorch traces. figure 8)

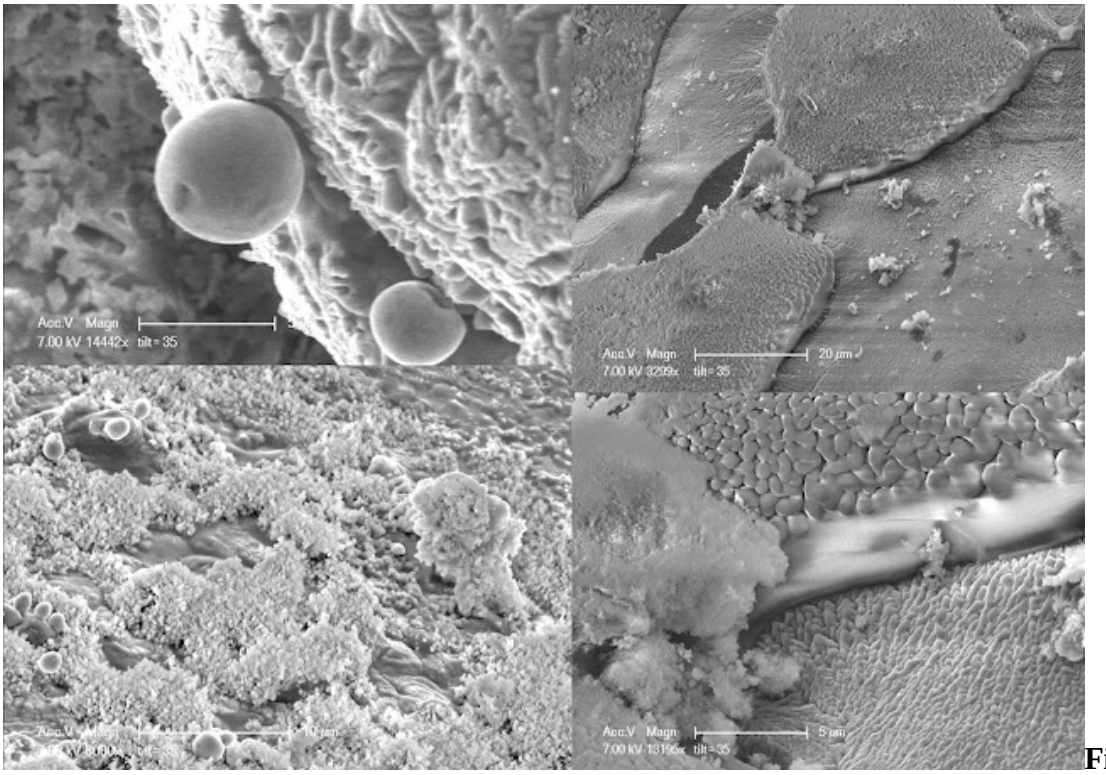


Figure 5, Examples of small "naked" micro silicon globules supposed to represent the energy bullet tunneling exit .

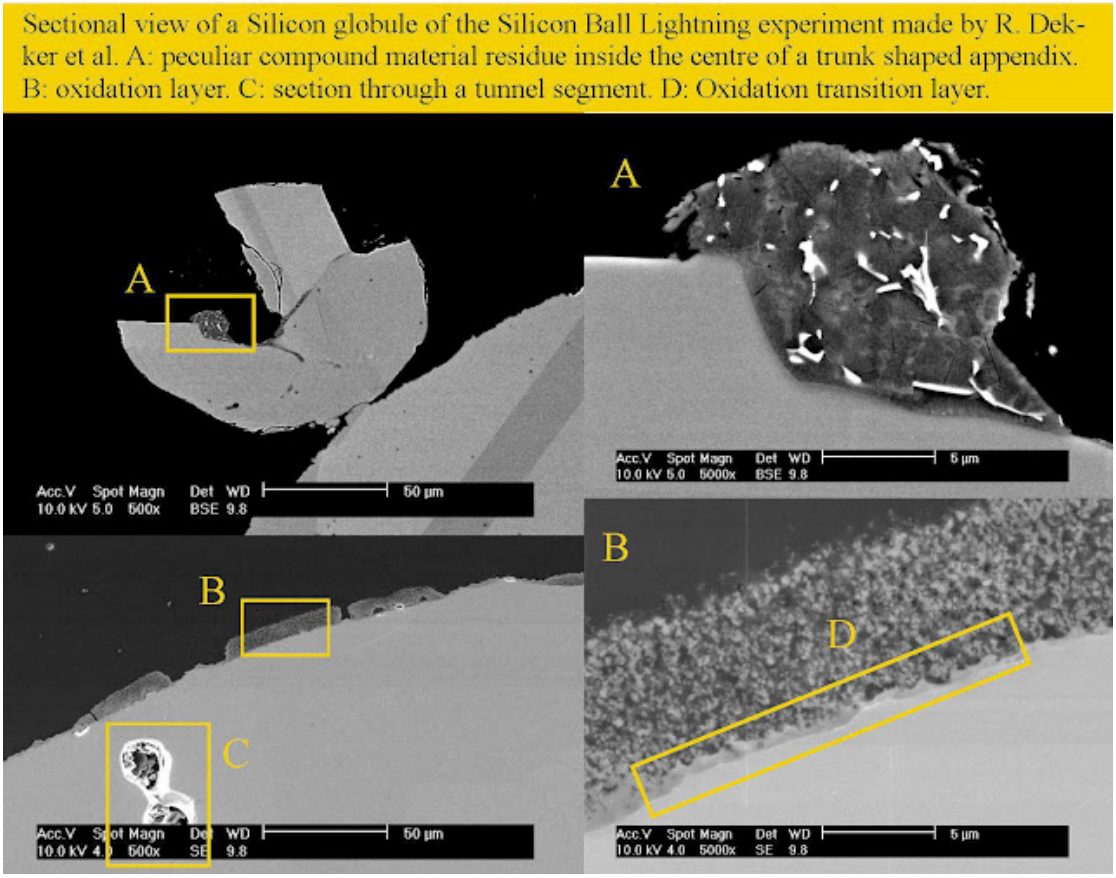


Figure 6: Sectional views.

A; Future metallurgical research should define which molecules are gathered here.

B; Future research should produce clues why the Oxidation skin is monolithic and has a very thin boundary layer (D)
C: This double hole could be representing the curved energy exit tunnel as the origin of the nearby located trunk shaped appendix.(A)

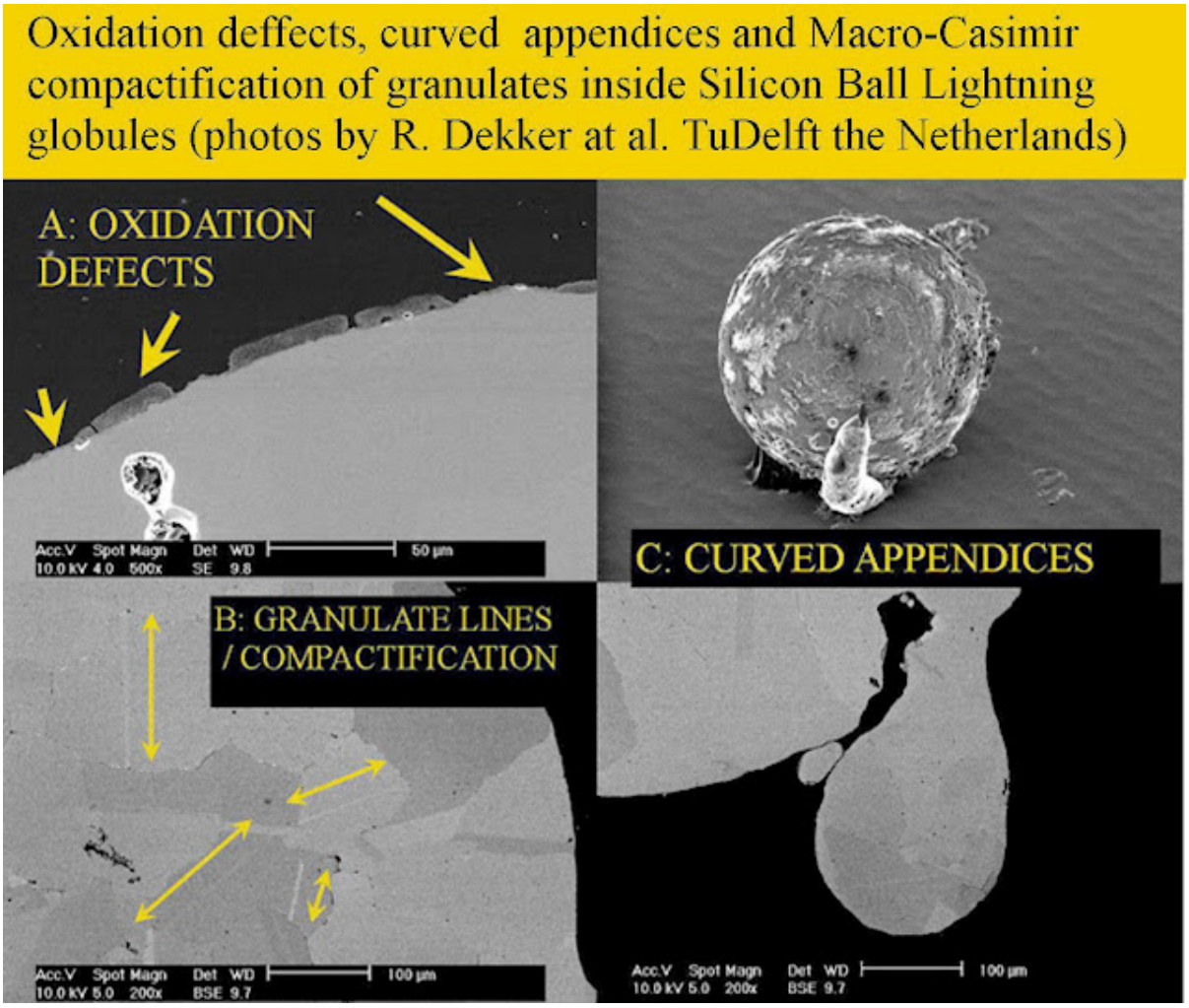


Figure 7,

Figure 8: Silicon Ball Lightnings leaving black scorch traces on (horizontal) paper, some with regular white bouncing contact points (ABCD).
Two traces are equipped with strange roundabouts (due to local silicon nucleus rotation?) at the end of the bouncing traces (A, C and D).
Future experiments should focus on these roundabouts, because it is assumed that here we will find silicon nuclei equipped with "Curved Trunks or Funnels" as the tunneling ejecting result of the large micro black hole.
Two aberrant rectangular scorches are observed at (E,F) assumed to be the scorching result of hot silicon particles without internal micro black holes.

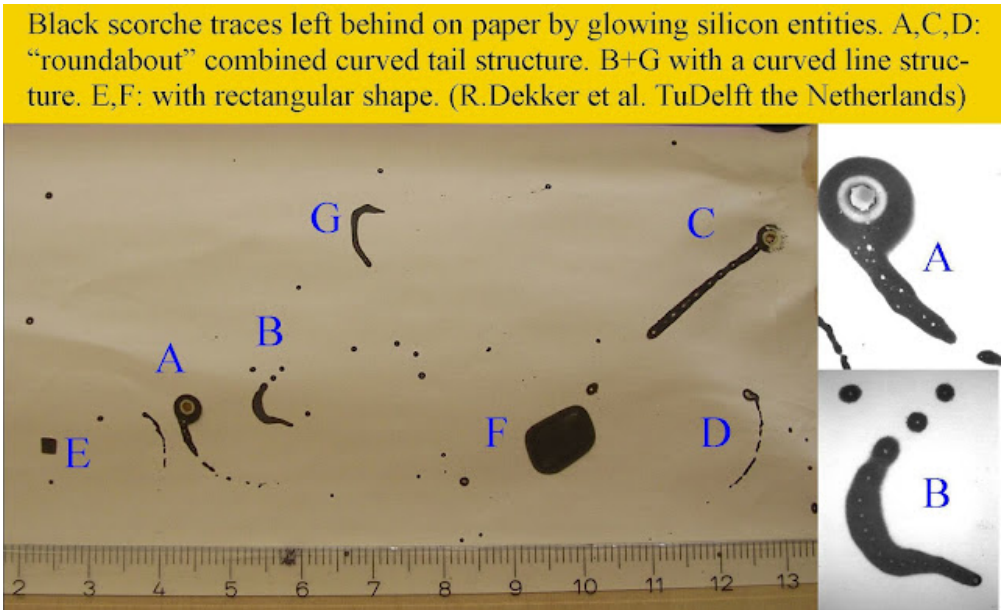


Figure 8, (Black scorches, by R.Dekker et al.)

Silicon Globules made by Leo Vuyk

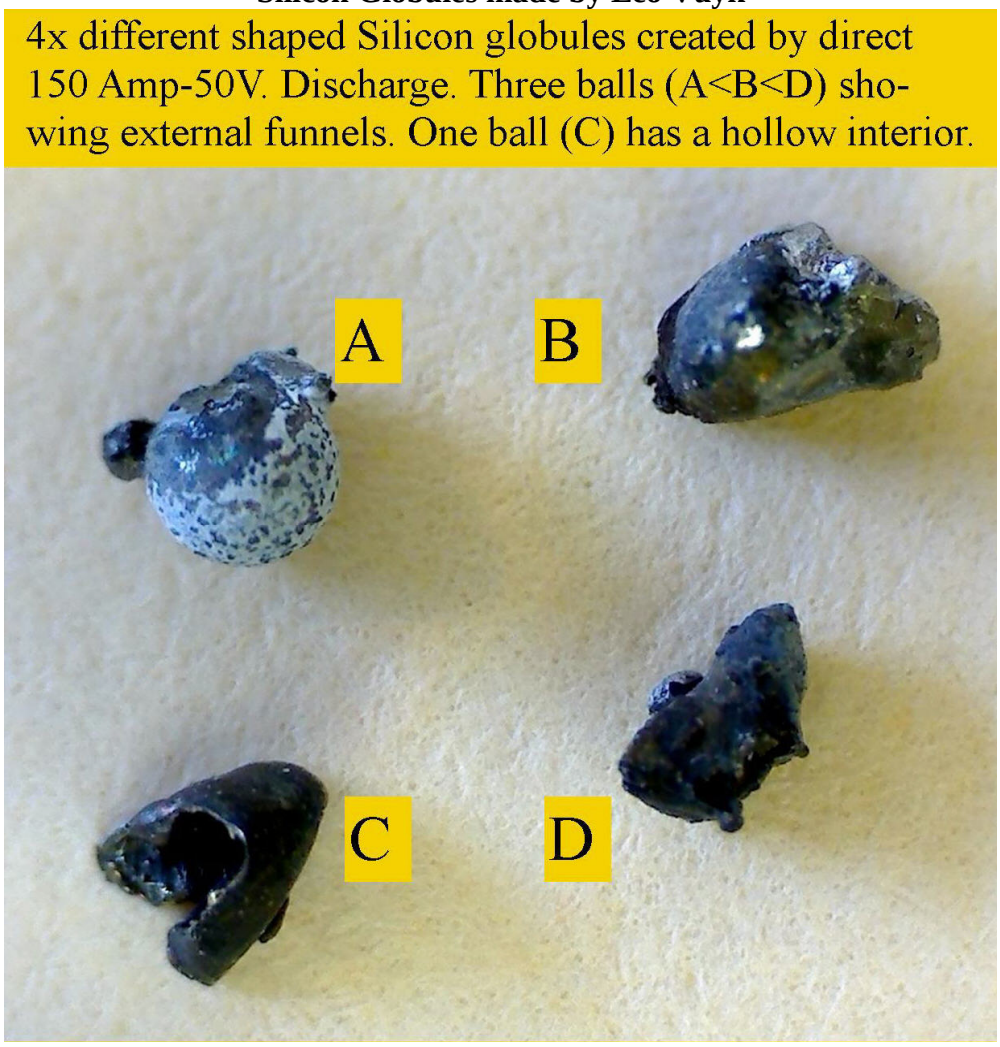


Figure 9. 4x silicon globules made by L.Vuyk and N.Vuyk. sept 2012. Globule C shows traces of energy bullet explosion.

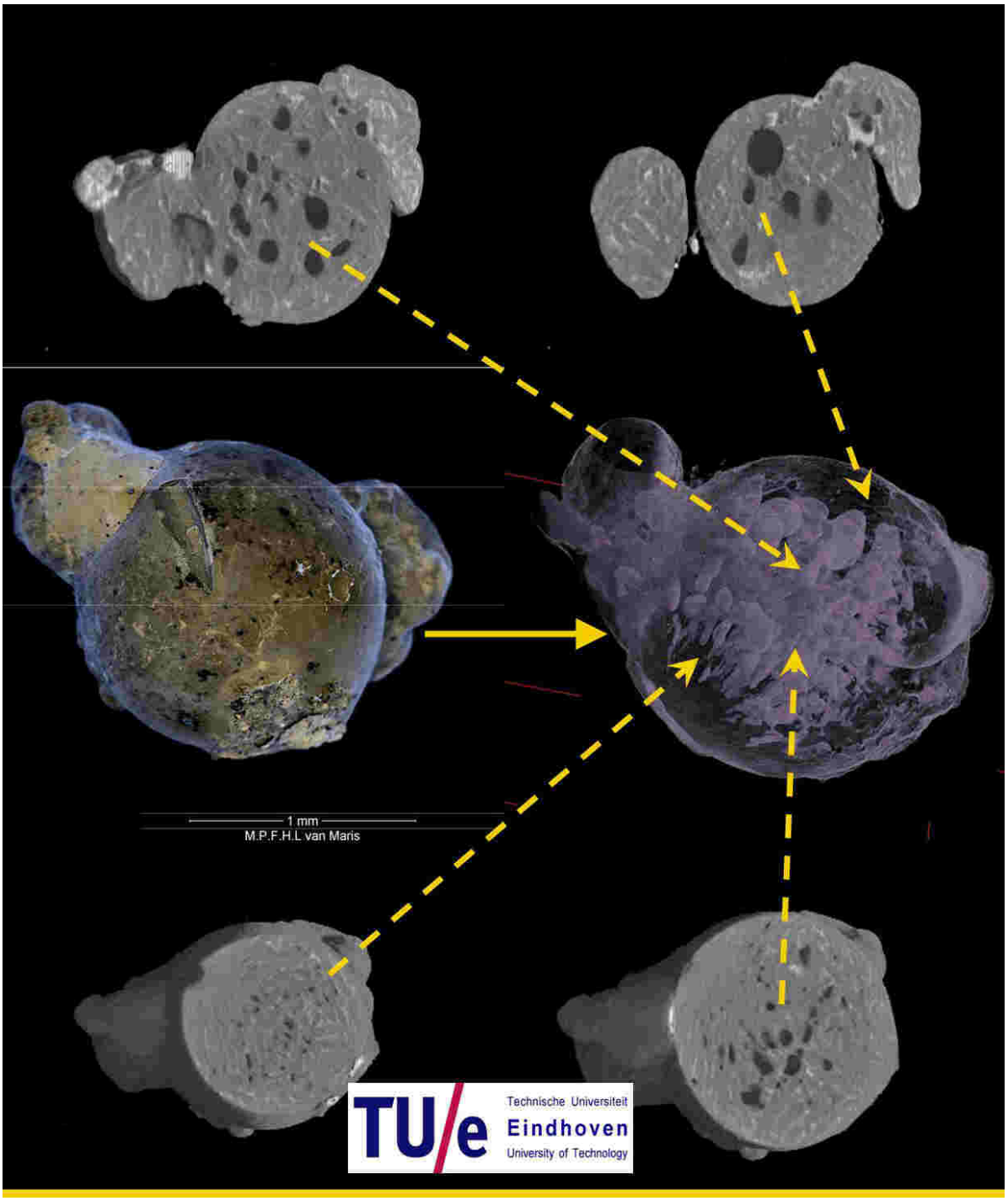
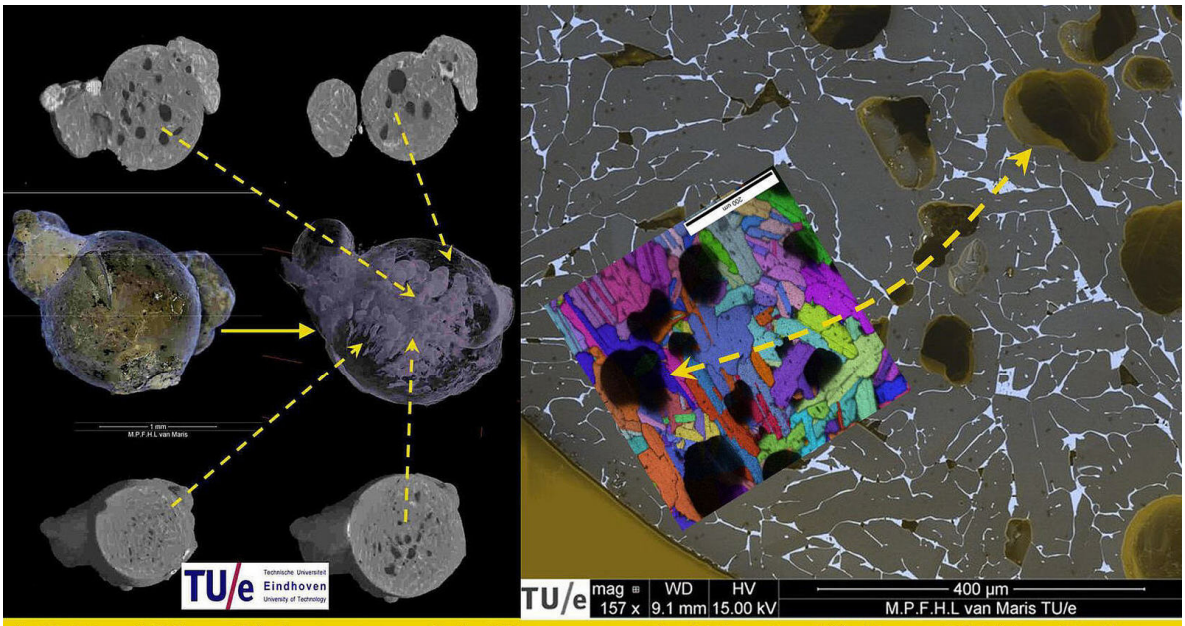


Figure 10, Internal Silicon globule structure made by 2D and 3D Nano CT scan at the University of Eindhoven (NL) Internal roughly linear cone shaped hollow bullet energy tunneling channels are observed, in black color at the 4x cross sections. (Leo Vuyk)



Left: internal Silicon globule structure made by CT nano scan at the University of Eindhoven (NL) Internal hollow channels are observed. According to Quantum FFF theory these channels are postulated to be left behind by travelling and evaporating "Quantum Knots". Right: Details of the internal structure of the silicon globule, with two different measurements: by SEM imaging (grey color) and EBSD imaging (colored inset) also by TU Eindhoven.

Figure 11.

Figure 12. Quantum Knots as dark matter black holes eating the vacuum and the origin of so called Casimir forces on matter.

Discussion.

The production of silicon globules by discharge of silicon wafers with different DC voltages and Amps seem to produce silicon globules with different shapes, structures and energy tunnelling characteristics.
The differences of the silicon globules produced with High Amps and Low Amps can be described as follows.

High Amps globule characteristics are:
Small globule : 0.5-0.8 mm diameter. (fig. 1)
Small energy tunnelling diameters inside the globules . (fig 3, B and C)
Large numbers of external micro globules found at some globule surfaces. (fig 5)
At least one large silicon funnel observed at the outside of the globule. (fig 1 and 4)

Low Amps globule characteristics are;
Larger globules: 0.8-1.4 mm diameter (fig 10)
Larger energy tunnelling diameters (fig 10)
Small numbers of external micro globules found at the globule surface. (fig 9)
No large silicon funnel observed at the outside of the globule. (fig 9)
One exploded hollow globule is observed. (fig 9)

New Physics?

Contempory Physics seems to be not able to explain several characteristics of the silicon globules and their long lasting lifetime observed after silicon discharge in the lab.
It looks as if the silicon globules are able to accumulate and release energy for several seconds after the discharge action.
In addition I suggest that the accumulated energy comes in the form of travelling energy "bullets" responsible for the tunnelling of hollow channels inside the globules and for the singular external funnels outside the globules mostly observed at high amps globules..
Reason to support more research in detail on this subject.

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Other examples of silicon based ball lightning.

Other explanations for spinning and self propulsion of silicon based ball lightning is given by: Gerson S. Paiva and Carlton A. Taft, Centro Brasileiro de Pesquisas Físicas, 22290-180, Rio de Janeiro, Brazil.
called:
SELF-PROPULSION OF LEIDENFROST SILICON BALL LIGHTNING
http://sbpmat.org.br/9encontro/especific_files/papers/B532.pdf

They suggested that when lightning strikes a surface, like the Earth's silica-rich soil, a vapor is

formed. This silicon vapor may condense into particles that combine with oxygen in the air to slowly burn with the chemical energy of oxidation.

National geographic quote:
Pavão and Paiva have spent two years testing the theory with a simple experiment.
They used electrodes to shock silicon wafers with enough electricity to create a silicon vapor.
Most of the artificial orbs lasted two to five seconds, but at least one has survived as long as eight seconds—approximating natural ball lightning and far exceeding previous efforts to create the phenomenon in the lab.

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